

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/EP2004/052272

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C08L27/08 C09D127/08  
/(C08L27/08,43:02),(C08L27/08,51:00)

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C08L C09D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, CHEM ABS Data, WPI Data, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0 185 464 A (ICI PLC) 25 June 1986 (1986-06-25) examples	1-12
A	DE 19 27 270 A (BASF AG) 3 December 1970 (1970-12-03) examples	1-12
A	US 3 108 017 A (SCHOTTE KURT T ET AL) 22 October 1963 (1963-10-22) examples	1-12
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

\* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*G\* document member of the same patent family

Date of the actual completion of the international search

15 December 2004

Date of mailing of the international search report

29/12/2004

Name and mailing address of the ISA

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	DATABASE WPI Section Ch, Week 198617 Derwent Publications Ltd., London, GB; Class A14, AN 1986-109310 XP002310787 & JP 61 051068 A (SHOWA DENKO KK) 13 March 1986 (1986-03-13) abstract -----	1-12
A	DATABASE CA 'Online! CHEMICAL ABSTRACTS SERVICE, COLUMBUS, OHIO, US; XP002310786 retrieved from STN Database accession no. 82:5214 abstract & SU 420 635 T (ARBUZOV, A. E., INSTITUTE OF ORGANIC AND PHYSICAL CHEMISTRY) 25 March 1974 (1974-03-25) -----	1-12

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## Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☒ Claims Nos.: 1-12 (in part)  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:  
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

### Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.  
☐ No protest accompanied the payment of additional search fees.

## FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box II.2

Claims Nos.: 1-12 (in part)

Present claims refer to compositions of a polymer P1 and a 'co-oligomer' O1, to a process to prepare these compositions, to their use for coating different surfaces, for producing single or multilayer films and moulded objects, to a process for coating different surfaces and to articles or parts of articles prepared with the compositions.

The subject-matter of claims 1-12 is not clear since the claims do not contain a definition of the relative term 'co-oligomer'. A clear definition of the term can however be found at description page 7, where component O1 is said to have a number-average molecular weight of 100-30.000, and a polydispersity index of 'greater or equal to 1'.

Thus, the claims do not contain a definition of P1 and O1 in terms that will exclude them from being one and the same polymer. A definition of P1 being different from O1 can only be found now at page 2, line 28 & ff., where it is stated that P1 has a 'number-average molar mass' of 'greater than 30.000' (...) to 'less or equal to 2.000.000' and having a polydispersity index of 'greater or equal to 1'.

Since the claims are redacted using unclear terms, its subject-matter actually includes not only compositions (etc.) of P1 and O1 being different polymers, but also compositions (etc.) constituted by a single polymer, such as, eg., any single homo- or co-polymer having at least one of the groups as recited for the monomeric unit (m2) of claim 1. These homo- or co-polymers include homo- or co-polymers of, eg., 1-octene, (etc.), vinylhexyl ether (etc) and almost all possible fluoroalkyl-, alkoxysilyl-, carboxyl- or phosphonic acid- group containing vinyl (or (meth)acryl, etc.) polymers.

Evidently, the initial phase of the search revealed a very large number of documents relevant to the issue of novelty. So many documents were retrieved that it is impossible to determine which parts of the claim(s) may be said to define subject-matter for which protection might legitimately be sought (Article 6 PCT). For these reasons, a meaningful search over the whole breadth of the claims is impossible.

Additionally, present claims 1-12 relate to an extremely large number of possible compositions, uses, process and articles. Support within the meaning of Article 6 PCT and/or disclosure within the meaning of Article 5 PCT is to be found, however, for only a very small proportion of the compositions, uses, process and articles claimed. In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible.

The description refers to compositions of vinylidene chloride (VdCl) as being 'preferred', and the examples disclosed refer exclusively to these VdCl polymer compositions.

## FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

In particular, the application discloses only three (3) examples (examples 7, 8 and 10) according to claim 1, in which component P1 of claim 1 is in all the three examples a VdCl/methyl methacrylate copolymer having a no.-av. molar mass of 63.000 g.mol(exp)-1, and component O1 is either a) the diacid derivative of a VdCl/methyl methacrylate/MAPHOS(OCH3) copolymer having a no.-av molar mass of 5800 mol.g(exp)-1 (examples 7 and 8), or b) a (VdCl/methyl methacrylate)-g-FDA polymer having a no.-av molar mass of 19.800 mol.g(exp)-1 (example 10).

Consequently, the search has been carried out for those parts of the claims which appear to be clear, supported and disclosed, namely those parts relating to compositions, according to claim 1, in which:

- 1) monomer (M1) is vinylidene chloride, and
- 2) component P1 has  
a number-average molar mass of greater than 30.000 to equal or less than 2.000.000 and  
a polydispersity index of greater than or equal to 1, and
- 3) component O1 has  
a number-average molecular weight of 100-30.000 and  
a polydispersity index of greater than or equal to 1, and  
carrying at least one group chosen from:
  - a)  $-(CH_2)b-CcF_2c+1$  (as defined in claim 1), or
  - b)  $-PO(OH)(OR_1)$  (as defined in claim 1),

as well as to a process to prepare these compositions, their use for coating surfaces and for producing single or multilayer films and moulded objects, to a process for coating surfaces and to articles or parts of articles prepared with the compositions, as specified (in part) in claims 1-12.

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.5), should the problems which led to the Article 17(2) declaration be overcome.

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP2004/052272

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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			AT 41023 T 15-03-1989
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